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XIX.

METEOROLOGICAL OBSERVATIONS, MADE AT BOWDOIN COLLEGE;

In a letter to Mr. Levi Hedge, F. A. A. *Tutor in Harvard College.*

By PARKER CLEAVELAND, A. M.

Professor of Mathematics and Natural Philosophy.

Bowdoin College, 29th Sept. 1808.

DEAR SIR,

I SEND you a short extract from my meteorological journal; by which you will be enabled to form some opinion of the extremes of temperature in this section of the District. I well know that a series of observations for several years is necessary to the forming of a correct estimate; but such a series is not yet attainable in this part of the country. The mean temperature of our climate, deduced from the greatest heat and the greatest cold, is a little lower, perhaps from $\frac{5}{10}$ to $\frac{9}{10}$ of a degree, than that reduced from three observations a day. This extract consists of observations of the greatest heat and the greatest cold during the months of January, February, and March in the years 1807 and 1808. I am informed by those, who have for a long time resided in this place, that the cold of the aforementioned months in the year 1807 was unusually severe; and, on the other hand, that the same months in 1808 were milder, than in common years. The thermometer, which I use, was made by Mr. Six; and is sensible and accurate. It is constantly exposed to the air, suspended at the northern side of a building, about seven feet above the

ground. There is no large object near it, excepting that, to which it is attached. Its height above the ground, and the very small quantity of snow, which usually lodges underneath it, effectually prevent the influence of any cold, in addition to that derived from the atmosphere. The degrees are those of Fahrenheit. In settled weather I have invariably found the greatest cold to be a little before the appearance of day break.

1807.		1808.	
January.		January.	
Mean of the greatest cold	+ 4°·46	Mean of the greatest cold	+10·91
Mean of the greatest heat	+24°·29	Mean of the greatest heat	+27·10
Mean temperature	+14°·37	Mean temperature	+19
Greatest range in 24 hours	+54°	Greatest range in 24 hours	37·5

Mean temperature of January from both years +16°·68.

February.		February.	
Mean of the greatest cold	+10°·4	Mean of the greatest cold	+19°·58
Mean of the greatest heat	+29°·83	Mean of the greatest heat	+33°·48
Mean temperature	+20°·11	Mean temperature	+26°·53
Greatest range in 24 hours	40°	Greatest range in 24 hours	41°·5

Mean temperature of February from both years +23°·32.

March.		March.	
Mean of the greatest cold	+21°·56	Mean of greatest cold	+23°·37
Mean of the greatest heat	+42°·35	Mean of greatest heat	+47°·77
Mean temperature	+31°·95	Mean temperature	+33°·57
Greatest range in 24 hours	42°·5	Greatest range in 24 hours	35°

Mean temperature of March from both years +32°·76.

The frost has commenced very early with us this season. Several plants in my garden were destroyed as early, as the middle of Au-

gust; at which time we had frost on two successive nights. On the 22d instant ice was formed two tenths of an inch thick.

Doctor Holyoke, in his "Estimate of the heat and cold of the American atmosphere, beyond the European, in the same parallel of latitude," suggests that this excess is in part attributable to the large number of evergreens growing upon the continent. If this be true with regard to the continent at large, some particular sections of the country, in which evergreens abound, may have an excess of cold above those parts of the same country, which have fewer evergreens. Surrounded as I am by trees of the aforementioned description, I design to pay further attention to this subject by observation and experiment.

Should you think this short extract worthy of any other preservation, than on your private files, it is at your command

as well, as your friend and

humble servant,

PARKER CLEAVELAND.